

Source, cyclotron & meson decay at rest Technology: Working Group

Bullet and Discussion Points:

- Short and Very-short baseline oscillation measurements
 - What are the neutrino rates and running times and do they provide definitive coverage of the interesting regions?
 - What are the estimated costs/timescales for mounting the experiment and what are the technical/logistical challenges that need to be solved?
 - What backgrounds are important and what methods of reduction are needed?
 - What are the major systematic uncertainties and how are they determined and controlled? How do they impact the experiment's oscillation sensitivity?
 - Is the main oscillation sensitivity coming from the overall rate or the energy dependent rate or a combination?
 - The L/E dependence is a powerful tool for establishing that neutrinos are oscillating. How well can the experiment measure the L/E dependence of the disappearance signal in comparison to sterile neutrino oscillation models with one or more sterile neutrinos?
 - What are the oscillation parameter measurement capabilities for the experiment if an oscillation signal is observed?
- Precision (anti-)neutrino-electron scattering measurements
 - What are the rates for the different sources and detectors?
 - What are the major backgrounds and how can the neutrino-electron elastic signal be extracted?
 - How well can one measure the electroweak and/or NSI parameters?
- Coherent neutrino scattering
 - What are the expected rates for the different sources and detectors?
 - What are the estimated costs/timescales for mounting the experiment and what are the technical/logistical challenges that need to be solved?
 - What are the major backgrounds to isolating a coherent signal?
 - What would it take to make a discovery of neutrino coherent NC scattering?
 - What are the other physics measurements can be made using coherent scattering interactions?
- Cross sections measurements relevant for astrophysics
 - What processes can be addressed and how well can the xsec's be measured with respect to what is needed?
 - What is the required understanding of the neutrino source in flux and energy dependence?
 - What is the required understanding of the detector parameters?
 - What backgrounds are important and what level of reduction is needed?